CLAIMS

What is claimed is:

1. A method comprising:

positioning a delivery device at a location in a blood vessel;

advancing the delivery device a distance into a wall of the blood vessel to a treatment site beyond an external elastic lamina of the blood vessel; and

after advancing the delivery device, introducing a treatment agent through the delivery device.

2. The method of claim 1, further comprising, after positioning the delivery device,

imaging a thickness of a portion of a wall of the blood vessel at the location; and

identifying a treatment site based on the imaging;

3. The method of claim 2, wherein imaging of a portion of a wall of the blood vessel comprises ultrasonic imaging the portion of the blood vessel wall.

4. The method of claim 2, wherein imaging of a portion of a wall of the blood vessel comprises optical imaging the portion of the vessel wall.

5. The method of claim 1, wherein the treatment site comprises a peri-adventitial space.

6. The method of claim 1, wherein the treatment site comprises a site radially outward from a peri-adventitial space.

7. The method of claim 1, wherein the delivery device comprises a catheter and positioning the delivery device comprises positioning a delivery port for a needle of the catheter at a position upstream from an obstruction.

8. The method of claim 1, wherein the blood vessel is part of a network and another blood vessel in the network other than the blood vessel wherein the catheter is positioned comprises an obstruction.

9. The method of claim 1, wherein the treatment agent is comprised in a sustained release carrier.

10. The method of claim 9, wherein the carrier comprises particles having an average diameter on the order of 10 microns or less.

11. The method of claim 10, wherein the carrier includes an opsonin-inhibitor.

12. The method of claim 1, wherein the treatment agent comprises an agent that induces an inflammation-inducing response.

13. The method of claim 12, wherein the treatment agent comprises a thermally conductive material, and the method further comprises, following introducing the treatment agent, heating the treatment agent.

14. The method of claim 1, wherein the treatment agent comprises an agent directed to a specific binding site.

15. A composition comprising:

an inflammation-inducing agent, wherein the composition has a particle size suitable for transvascular delivery.

16. The composition of claim 15, further comprising a carrier of the inflammation-inducing agent in the form of a particle having a particle size less than 100 microns.

17. The composition of claim 16, wherein the carrier comprises a material having a sustained-release property within a physiological setting.

18. The composition of claim 17, wherein the carrier is selected to sustain the effectiveness of the inflammation-inducing for a period selected from 1 day to 10 weeks.

19. The composition of claim 17, wherein the carrier is selected from the group consisting of poly (L-lactide), poly (D,L-lactide), poly (glycolide), poly (lactide-co-glycolide), polycaprolactone, polyanhydride, polydiaxanone, polyorthoester, polyamino acids, poly (trimethylene carbonate), and combinations thereof.

20. The composition of claim 15, wherein the inflammation-inducing agent is one of a bioresorbable inorganic compound, fibrin, gelatin, chitin, a bacterial polysaccharide, a metal.

21. The composition of claim 15, wherein the inflammation-inducing agent is selected from the group consisting of a polycaprolactone, a polyhydroxybutyrate-valerate, a poly(oxy)ethylene, a polyurethane, and a silicone.

22. The composition of claim 15, further comprising an agent directed to specific binding sites.

23. A composition comprising:

at least one a treatment agent disposed in a carrier; and

an opsonin-inhibitor coupled to the carrier.

24. The composition of claim 23, wherein the composition is formed as a particle having a diameter on the order of up to 10 microns.

25. The composition of claim 23, wherein the treatment agent comprises an agent directed to specific binding sites.

26. The composition of claim 23, wherein the treatment agent comprises an inflammation-inducing agent.

27. The composition of claim 23, wherein the carrier is selected to sustain the effectiveness of the treatment agent for a period selected from 1 day to 10 weeks.

28. An apparatus comprising:

a catheter body capable of traversing a mammalian blood vessel;

a dilatable balloon assembly coupled to the catheter body comprising a balloon having a proximal wall;

at least one needle body disposed within the catheter body and comprising a lumen having dimensions suitable for a needle to be advanced therethrough, the at least one needle body comprising an end coupled to the proximal wall of the balloon;

an imaging body disposed within the catheter body and comprising a lumen having dimensions suitable for a portion of an imaging device to be advanced therethrough and adapted to be shared simultaneously or sequentially with a guidewire; and

a portion of an imaging device disposed within the imaging body adapted to generate imaging signals of the blood vessel.

29. The apparatus of claim 28, wherein the imaging device comprises one of an optical imaging device and an ultrasonic imaging device.

30. The apparatus of claim 28, wherein the imaging body comprises a first transparent portion and a second portion with the first portion extending from a proximal end of the catheter body through a portion of the balloon, and the first portion is adapted to comprise an imaging device and the second portion is adapted to comprise a guidewire.

31. The apparatus of claim 30, wherein the first portion of the imaging body is separated from the second portion of the imaging body by a plug.